

Impact Of The Implementation Of Electronic Health Records On The Health System, Lima 2023

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ABSTRACT

These years of pandemic have ratified our health fragility, as well as the relevance of having our system of electronic medical records implemented throughout the country, which is carried out in order to establish standards to fortify and carry out the record systems. of the users of all health establishments in order to provide quality care. The objective is to determine the impact of the implementation of electronic medical records in the Health System through the qualitative descriptive systematic review of the research studies, using the search results through the Prisma Flow Diagram. The investigations of the indexed journals in different digital platforms of Scielo, Scopus, International Journals, IDB, management of accessible Spanish systems were compared, having a better organization of the references that will cooperate with the advancement of the content studied. The results show that the implementation of electronic medical records is in the process of being installed nationwide, which implies technological challenges, training of multidisciplinary personnel, adoption by health care providers, which often makes the continuous rotation of patients difficult. personnel with little involvement of them and that the State is not carrying out continuous monitoring through a periodic evaluation of the implementation of electronic medical records in the Peruvian health system, since interoperability is hindered and delayed by the lack of merger of health institutions in Peru, and insufficient budgets which is exacerbated by the present current political crisis.

Keywords: Health system, electronic medical records, health institutions, interoperability.

INTRODUCTION

In Latin America, 67% of the population has access to the Internet according to ECLAC (2021) figures on IT infrastructure in 2019, which is in a process of digital transformation in healthcare, seeking to keep pace with global trends. In addition to digital health services that can collect relevant patient data and interpret it accurately and automatically with the help of software, healthcare workers can prevent, detect and treat diseases faster, as well as implement new technologies, talents and processes to remain competitive in a changing technological environment.

Therefore, through Law No. 30024 in 2013, the National Registry of Medical Records (RENHICE) was created, the Peruvian State authorizes the use of an electronic platform directed by Minsa, as the governing body with the aim of empowering users to allow access of them. By means of DS.022-2017, PCM defines the function of information governance, and in D.S No. 006 and 007-2020 it establishes the beginning of the digital transformation accompanying the field of trust and computer security,

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because in addition to digital interconnections, this technological instrument can detail and update the medical record and make it available anywhere in the country. Therefore, the creation of cyber medical records represent a healthcare tool that understands the patient's data and organizes it to obtain relevant information to facilitate the decision-making.

According to the World Health Organization (2021) on "the digital transformation of medicine must be ensured, fostering inclusive connectivity through open and sustainable interoperable information systems that participate in artificial intelligence and emerging technologies" likewise, in the PAHO/WHO directive, Dr. Carissa F. Etienn (2021) said: "We must re-examine public health and refocus on differences to ensure that the cyber divide does not widen gaps in health inequalities." (pp.

The current health situation has led us to use new digital technologies to improve services to the different institutional users, after facing the COVID 19 pandemic with little leadership in it, this has a strong impact, as well as in the international context, which in turn has affected Peruvians in their economy, Therefore, it is necessary to accelerate a healthy digital transformation in an orderly and systematic manner. However, in our country we have a fragmented health sector and the implementation of EHRs in different health facilities is still limited to allow the progress that needs to be made.

Bayona (2019) mentions that "The implementation of interoperable EHRs in Peru is important, but the health network is segmented and the institutions that make it up operate independently without much national effort directed in the Unified Health System". (p. 99)

For Condori (2020), it refers to the fact that "In our country, we observe that the health service is hindered and delayed by various factors that resist the process, preventing health professionals from adopting a strategy at the national level to the benefits of interoperable systems". (pp.107)

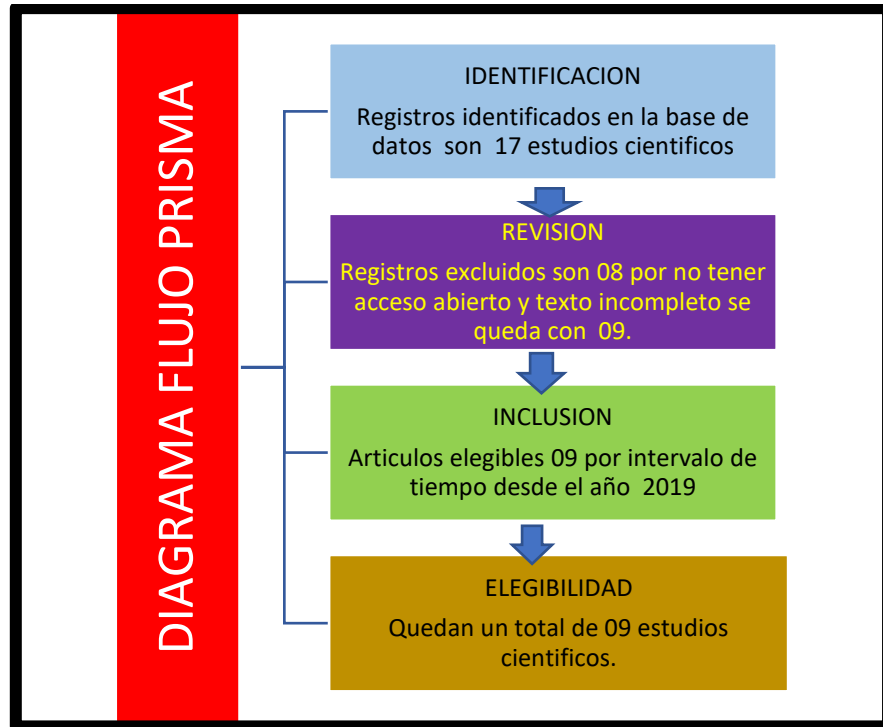
Therefore, this article will carry out a study of the repercussions of the process of the evolution of EHR in the Peruvian health system, as possible limiting aspects for an appropriate comprehensive execution of electronic records in Peru; In this way, it allows to recognize opportunities for improvement that the health sector can consider to adjust the previous implementation to achieve the goals and objectives that benefit the Peruvian population, contributing to the reduction of existing problems and disparities in the health area of our country and finally, the results of the search will be applied to identify the impact of the integration of digital platforms and EHR in health services through the country. through verification.

II.METHODOLOGY:

The outline of the article applied the qualitative research type of systematic review, using the digital platforms of Scielo, Scopus, International Journals, IDB, management of accessible Spanish systems, detailed and documented examination, established using different descriptors of EHR and health system where 17 scientific studies were found.

The review was based on inclusion criteria such as affinity and importance, as well as access to the full text, online availability, also achieving the objectives set in the publication, after explanation of the title and addition of excerpts, 17 studies were added that read in their entirety, among them 09 studies were selected from which they meet the inclusion judgments and only those that were fully accessible were included. In which the search results of scientific research will be reflected through a Prisma flowchart.

PRISM FLOW DIAGRAM



III.RESULTS:**Table 1 Scientific evidence on the implementation of Electronic Health Records in the Health System during 2019-2022.**

AUTHOR	YEAR OF PUBLICATION	RESEARCH DESIGN	POPULATION AND/OR SAMPLE NUMBER	RESULTS
1.Bayona Castañeda.	2019.	Exploratory	Kaelim Hospital & Hospital Leonardo Thompson (Essalud), Tarapoto Hospital, San Genaro Health Center, Ate Vitarte Hospital, VES Emergency Hospital (MINSA), Solidarity Hospital, Clin. Delgado, Clin. Anglo-American, San Pablo Clinic, Peruvian Japanese Clinic (private Ipress)	The objective of creating RENHICE for the health area is to achieve interoperability is hindered and delayed by the lack of merger of health institutions in Peru, which is exacerbated by the current political crisis. In spite of this, there are also competencies to overcome, which are the foundation of the present structures, the absence of communication between devices, provision and access to mobile networks for users with insufficient means to meet their needs, which is a fundamental difference to be addressed, and the financing of health services.

2.Bastias and Ulrich .	2019	Type of qualitative research with inductive-deductive documentary analysis	48 specialist participants from different countries.	The first elements of the implementation of EHR is the development of an adequate regulation to allow the coordination of those involved, contributing to the generation and flow of information in the system. Several prerequisites must be taken into account when designing and developing a national EHR system first, the government must present a digital strategy, in addition to adequate budget and internet connectivity. A digital strategy is the basis of the success of the national EHR system, the Ministry of Health should develop a National Health Strategy, focus on digital health and electronic medical records, the participation of all is fundamental for the functioning of the organization of the system and its extensions, this data is main for the progress of decisions and data properties.
3.Tuanama Álvarez.	2019	Qualitative study.	27 members of the multidisciplinary team from various health institutions in metropolitan Lima.	The EHR plan has successfully implemented a series of medical record models for primary care. However, hosting EHR is a complicated transformation that has resulted in an inconsistent utilization of the qualities of the healthcare professional. In the same way, its implementation is fragile, in terms of the training and monitoring of user health personnel. The multidisciplinary team

				found EHR to be a useful tool in their daily work and to make a significant contribution to improving care, but the way of using it and improving the learning space needed to be rethought.
4.Chá Ghiglia.	2020	Qualitative research through semi-structured interviews.	16 doctors from a health institution.	<p>The operation of the EHR is a technological transformation that is being applied in the evolution of the health system. The aggregation of ICT in the work of health professionals is one of the fundamental challenges of this development, which implies advancing goals for use and acquisition. The use of the right EHR will maximize the services provided to users and therefore health care.</p> <p>Denial is observed in health specialists, the most common being interference in the doctor-user relationship, fear of what is not known, lack of adequacy to the work method as well as to the benefits of medical personnel.</p>
5. Condori and Rivera.	2021	Qualitative research of the grounded theory type.	IPRESS: El Progreso Maternal and Child Center.	<p>The main imperfections found in the administration of MINSA was that there was a labile connection between the DIRIS Lima Norte and the CMI El Progreso, demonstrating a disorganization of the rules in the field of the activation of HCE, therefore, there is a lack of definition of the programs and functions of the members of the CNI of the e-Qhali Electronic Health Records Information System. In the same way, an inappropriate human capital management for the execution is visualized, due to a constant rotation of employees and</p>

				little involvement of the same, in addition to the diversion of the goods determined for this purpose and scarcity of budgetary resources for the implementation of the SIHCE e-Qhali.
6. Espejo Ávila.	2021	Descriptive design, correlational, cross-sectional	99 Bachelor of Nursing at the Regional Teaching Hospital of Trujillo	That the management of the Electronic Information System is significantly related to the quality of the health service, as well as the size and operation of the health services of the Regional Teaching Hospital of Trujillo.
7. Borges, Cynthia.	2021	Case study.	State of Bahia.	However, Bahia seems to have overcome the most significant resistance and has begun a firm path towards the integration of data in the State, the coincident investments in hospital infrastructure and technology applied to health management result in better structured, higher quality, more agile and efficient in the provision of the service. The user has a compact anamnesis and the medical health professional has the patient's HC, which means avoiding an error in diagnosis, and the State avoids unnecessary expenses and identifies what is essential and priority for the next investment, thus contributing to the quality of public health.
8. Tume Arrunátegui.	2022	Research No experimental, cross-sectional, correlational.	34 health professionals from Essalud's I Octavio Mongrut Muñoz Hospital,	If an appropriate registration is not carried out, the management of the EHR would be harmed to be able to obtain information on the status or evolution of a patient's disease

				and the main problems of the computer registration in the EHRs of the diagnoses of the Hospital I Octavio Mongrut Muñoz, it could be determined that it is the lack of training of the multidisciplinary team that works in the hospital in question.
9.Trujillo et al.	2022	Qualitative systematic review	14 studies from WOS and 4 from Scopus.	<p>The bottom line is that global digitalization is in development, but has experienced an unexpected acceleration due to the COVID-19 pandemic. For this to happen, the management structure has to change, working as a team, Investment, Financing, Public Policies, among other things, since the future is inconstant.</p> <p>In this sense, because much of the Latin American experience goes through crises in the political, socio-cultural and economic order, which makes it difficult for people to follow the path towards digital transformation, and in the best of cases, they show that the development and inequality of the region is different with respect to the world</p>

Source: Scientific review research studies.

IV.DISCUSSION

The implementation of EHRs in Peru is in a gradual process, which seeks to modernize and improve the management of medical information, currently it is still far from achieving these theoretical benefits, since many health institutions continue to report by hand and are still registered on paper that are deposited in large warehouses. whether due to lack of connectivity, benefits of digitalization or institutional management. This technological tool allows the data to be meticulously specific, up-to-date, and available anywhere in the territory thanks to digital connection and interoperability. The health system is in the process of being implemented and is part of a unified information structure, in which we need to work in a network and overcome health fragmentation, constituting a challenge that will allow us to have the competence to plan the country's public health

The findings found in the current systematic review reached a total of 09 investigations in the database of Scielo, Scopus, International Journals, IDB found in Spanish. Among the countries were Peru with 48%, Venezuela with 11%, Spain with 11%, USA with 11%, Uruguay with 11% and Brazil with 11%, with respect to the studies were systematic review 11% and 88% applying qualitative research.

The implementation of electronic medical records in Peru seeks to improve the quality and efficiency of medical service, promote continuity of care, reduce errors and duplications, facilitate information management and protect patient privacy.

For Bastias (2019) indicates that for the implementation of the EHRs, a national system must be developed, the government must present a digitized plan, in addition to an adequate budget and internet connectivity. With the digital strategy being the basis of the success of the national EHR system, focusing on health and electronic medical records, the participation of all is fundamental to the functioning of the organization of the system and its extensions, this data is essential for the progress of decisions and properties of the data. All these actions will lead to the activation of the digital files, allowing the multidisciplinary team to provide quality care in favor of the internal and external user. In this way, Chá (2020) reports that there is a refusal in health specialists to use ICTs, the most common being interference in the doctor-user relationship, fear of what is not known, lack of adequacy to the work method, as well as the benefits of medical personnel. It should be noted that ICTs help the sector improve the quality of life and care, as well as people's satisfaction, which also helps to reduce the disparity and increase income to enjoy good health, due to this, more integrated health systems are achieved and not only more interconnected. Likewise, Espejo (2021) emphasizes that the administration of the digital information system is notably linked to the quality of the health service, as well as to the size and operation of the health benefits of the Regional Teaching Hospital of Trujillo, agreeing with Tume (2021) that if an appropriate registration is not made, the management of the EHR would be harmed in being able to obtain information on the status or evolution of the disease of a patient and the main problems of the computerized record of the diagnoses of the Hospital I Octavio Mongrut Muñoz, which are due to the lack of training of the multidisciplinary team that works in the hospital in question, Therefore, it is imperative to promote practices that allow the adoption and deployment of services, such as licensing to speed up the installation of infrastructure, provision of ICT equipment, connection of medical centres and the use of mobile technology for digital health

Similarly, Borges (2021) confirms that, Bahia in Brazil seems to have overcome the most significant resistance to the digitization of medical records and has begun a firm path towards the integration of data in the State, the coincident investments in hospital infrastructure and technology applied to health management resulting in better structured units, of higher quality, more agile and efficient in the provision of the service. The user has a compact anamnesis and the medical health professional has the patient's HC, which means avoiding an error in diagnosis, and the State avoids unnecessary expenses and

identifies what is essential and priority for the next investment, thus contributing to the quality of public health.

It is worth noting that Brazil leads the region, ranking 41st in the world (out of 158 countries), in the "medium to high" ranking according to the Readiness Index for Cutting-Edge Technologies, developed as part of the comparative report. With Peru ranked 89th in the "medium-low" category globally, the impact of the digital revolution has become more pronounced and intensified with the spread of the pandemic, reinforcing current long-term trends. There is a need to integrate the digital revolution into a great engine of sustainable development through a gradual structural change, through a strong investment to develop the digital sector in the region, promote the adoption of these technologies in productive institutions by governments, achieving universal access to and use of these techniques, cultivate the ability to make the most of it, whereby the indications of the final result will depend on the implementation of strategies, policies and timely actions capable of reorienting digitalization in a post-sustainable world.

Added to this is Tuanama (2022), who emphasizes that the digital medical records plan has successfully implemented a series of medical record models for primary care. However, hosting EHR is a complicated transformation that has resulted in an inconsistent utilization of the qualities of the healthcare professional. In the same way, its implementation is fragile, in terms of the training and monitoring of user health personnel. The multidisciplinary team felt that EHR was a useful tool in their daily work and that it contributed significantly to improving care, but it was necessary to rethink the way it was used and improve the learning space. With this, Bayona (2019) indicates that the objective of creating RENHICE for the health area is to achieve interoperability, which is hindered and delayed by the lack of the merger of health institutions in Peru, which is exacerbated by the current political crisis. In spite of this, there are also competencies to overcome, which are the foundation of the present structures, the absence of communication between devices, provision and access to mobile networks for users with insufficient means to meet their needs, which is a fundamental difference to be addressed, and the financing of health services.

Therefore, we will say that our interoperable systems in the health sector greatly facilitate communication and the exchange of information between all parties, with one of the greatest beneficiaries being users who will be able to enjoy increasingly better digital protection and security thanks to the interoperability that is in process with the lack of integration of the MINSA, Essalud, Armed Forces and private institutions.

Condori (2021) also stresses that the main imperfections found in the administration of MINSA was that there was a labile connection between the DIRIS Lima Norte and the El Progreso Maternal and Child Center, demonstrating a disorganization of the rules in the field of EHR activation, therefore, there is a lack of definition of the programs and functions of the members of the National Committee for the Implementation of the SIHCE. In the same way, an inappropriate human capital administration for the execution is visualized, due to a constant rotation of employees and little involvement of them, in addition to the diversion of the goods determined for this purpose and the scarcity of budgetary resources for the Implementation of the e-Qhali.

Finally, Trujillo (2022) indicates that the conclusion is that global digitalization is developing, but has experienced an unexpected acceleration due to the COVID-19 pandemic. For this to happen, the management structure has to change, working as a team, Investment, Financing, Public Policies, among other things, since the future is inconstant. In this sense, because much of the Latin American experience is going through crises in the political, socio-cultural and economic order, which makes it difficult for people to follow the path towards digital transformation, and in the best of cases, they show that the development and inequality of the region is different from the world.

V.-CONCLUSIONS:

1.-That the implementation of electronic medical records in the health system of our country is still in process, but it should be noted that the administration of a health system is a complex and multifaceted challenge, and studies that analyze its aspects are key and valuable to address the problems achieving significant improvements.

2.- That it was evidenced that there are improvements in the efficiency of electronic medical records, allowing faster and easier access to patients' medical information, reducing waiting time. Therefore, streamlining care processes, reducing the duplication of tests and facilitating coordination between different health professionals, to provide quality care in the healthcare system.

That it is observed that, with electronic medical records, the risk of errors in the interpretation of handwriting or the loss of important data that help the multidisciplinary team to make evidence-based decisions with the results of the users, as well as provide data that can be used for epidemiological analyses and public health studies, is minimized.

4.-That the implementation of electronic medical records involves technological challenges, training of multidisciplinary staff, adoption by health care providers, which often hinders the continuous turnover of personnel and little involvement of them.

5.- That it is certified that the State is not carrying out continuous monitoring and periodic evaluation of the implementation of electronic medical records in the Peruvian health system, since interoperability is hindered and delayed by the lack of the merger of health institutions in Peru, and insufficient budgets, which is exacerbated by the current political crisis.

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